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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,997	09/30/2003	Janakiraman Vaidyanathan	EH-10885 (03-368)	5257

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EXAMINER

EVANS, GEOFFREY S

ART UNIT PAPER NUMBER

1725

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,997

Applicant(s)

VAIDYANATHAN ET AL.

Examiner

Geoffrey S. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6, 7, 10, 12, 14, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 3, 5, 8, 9, 11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20050328.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1,6,7,10,12,14,16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emer in U.S. Patent No. 6,380,512 in view of Snow et al. in U.S. Patent Application Publication No. 2003/0142862 A1. Emer discloses a method and apparatus for laser drilling with a camera (element 7) cooling holes in a turbine blade (see column 2, lines 34-37). Emer does not disclose using a stereovision system for determining the position of the hole. Snow et al. teaches moving the camera relative to the workpiece to measure the location of physical features on the workpiece (e.g. see paragraphs 12, 41 and 43), and that this can be done in a fast manner (see paragraph

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2). It would have been obvious to adapt Emer in view of Snow et al. to provide this to determine quickly the position of the laser drilling location with increased accuracy.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Emer (512) in view of Snow et al. as applied to claim 1 above, and further in view of either Mueller et al. in U.S. Patent No. 6,615,099 or Clements et al. in U.S. Patent No. 4,545,018. Mueller et al. teaches calibrating the optics to compensate for the optical offset of the laser source. Alternatively, Clements et al. teaches calibrating the laser to compensate for aging of the device. It would have been obvious to adapt Emer in view of Snow et al. and either Mueller et al. or Clements et al. to provide this to drill the hole at the proper location.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Emer (512) in view of Snow et al. in view of either Mueller et al. or Clements et al. as applied to claim 2 above, and further in view of Zhang in U.S. Patent Application Publication No. 2003/00222984-A1. Zhang teaches calibrating a camera (e.g. see paragraph 2). It would have been obvious to adapt Emer in view of Snow et al., Zhang and either Mueller et al. or Clements et al. to provide this to accurately extract three-dimensional information.

6. Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection. In view of Applicant's response to the first office action, it is agreed that Emer (512) does not disclose laser drilling with stereovision.

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7. Claims 3,5,8,9,11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dulaney et al. in U.S. Patent No. 6,292,584 discloses a laser peening apparatus that determines the proper position of the workpiece for laser processing (see column 6, lines 5-11, 40-47, 61-67 and column 8, lines 20-31) using a video camera (element 42) and an image processing computer to perform triangulation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571)-272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

GSE


Geoffrey S. Evans
Primary Examiner
Group 1700